

```
import java.io.*;
import java.util.*;
```

```
public class RC5 {
    private int w = 32;
    private int r = 12;
    private int b = 16;
    private int[] s;
    private int[] L;
```

```
private RC5 (byte[] key) {
    Key Expansion (key);
}
```

```
private void Key Expansion (byte[] key) {
    int u = w/8;
    int c = (key.length + u - 1) / u;
    L = new int[c];
```

```
for (int i = key.length - 1; i >= 0; i--) {
    L[i/u] = L[i/u] << 8 + (key[i] & 0xFF);
}
```

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```

int t = 2 * (n+1);
s = new int[t];
s[0] = 0x07E15163;
for (int i = 1; i < t; i++) {
    s[i] = s[i-1] + 0x9f3729b7;
}
int A = 0, B = 0, i = 0, j = 0;
int n = 3 * math.max(c, t);
for (int k = 0; k < n; k++) {
    A = s[i] = Integer.rotateLeft(s[i] + A + B, 1);
    B = L[j] = Integer.rotateLeft(A + B + C(A + B));
    i = (i+1) % t;
    j = (j+1) % C;
}

```


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```
public string void main (string[] args) {  
    byte[] key = "This is secret key".getBytes();  
    RCS rcs = new RCS(key);  
    int plain1 = 0x12345678;  
    int plain2 = 0x9ABCDEF;  
    System.out.println("plaintext: " + toHex(new  
    int[] cipher = rcs.encrypt(plain1, plain2);  
    System.out.println("Encryption: " + toHex(cipher));  
    int[] decrypted = rcs.decrypt(cipher);  
    System.out.println("Decrypted: " + toHex(..
```

}

}

Plaintext: 12345678 9ABCDEF0

Encrypted: 4A1F0A87 17F17D3E

Decrypted: 12345678 9ABCDEF0